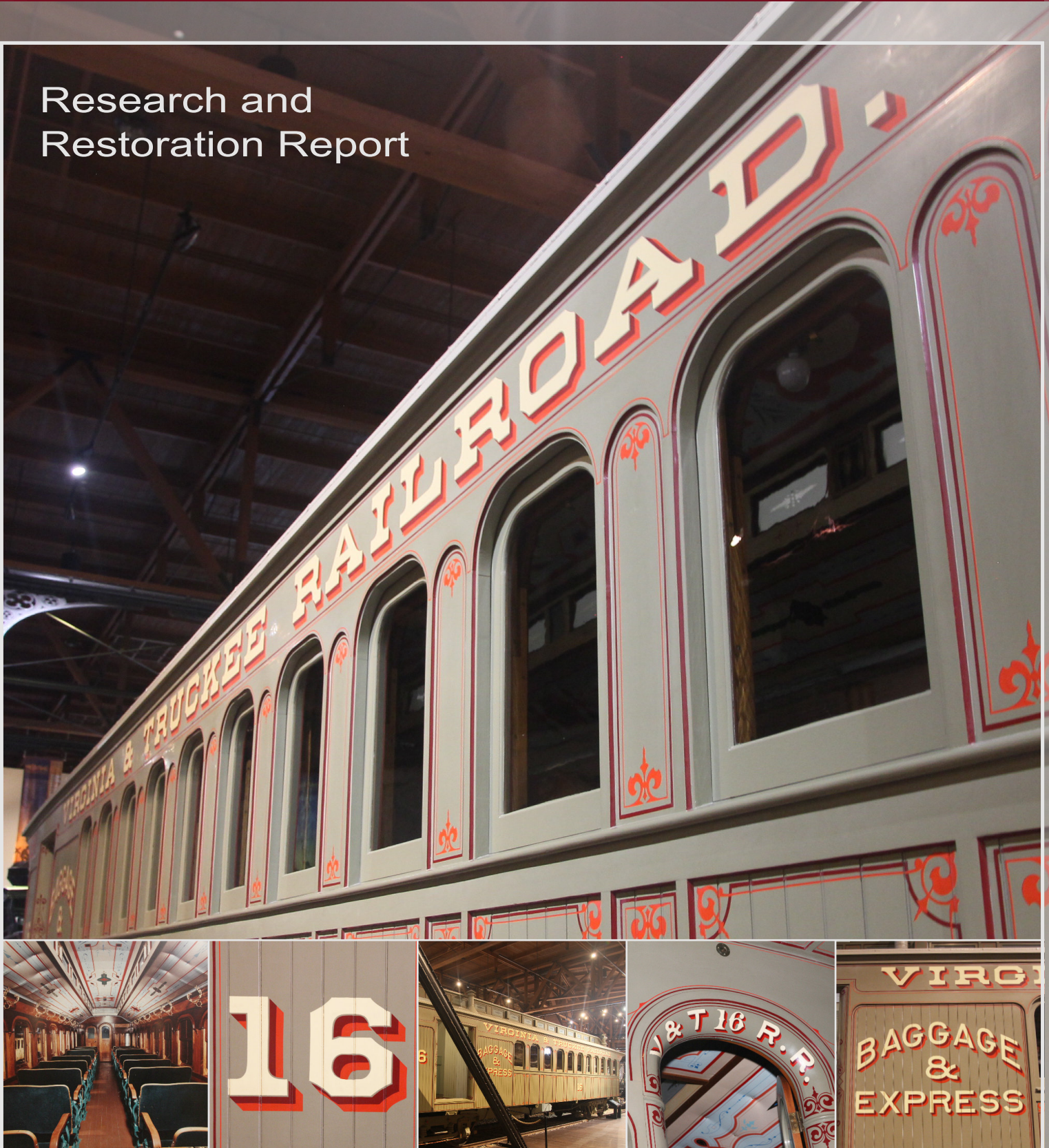


Virginia & Truckee #16

COMBINATION CAR

Research and
Restoration Report



£
The Virginia and Truckee Railroad

Combination Caboose Car No. 16

11/89

Research and Restoration Report

by

RICHARD RODDA

and

The Restoration Research Staff
California State Railroad Museum
Department of Parks and Recreation

November 8, 1979

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This report is one of a series prepared by the Restoration Research staff on equipment being restored by the California State Railroad Museum. It is intended primarily for "in-house" use and provides what our research revealed of the construction and subsequent history of the Virginia and Truckee Combine No. 16, the first passenger car restored by the museum.

The written record of research on this car is much shorter than the narrow gauge cars, the Monterey & Salinas Valley Railroad, and the "Silver State" of the Nevada Central Railroad. Research capability was almost nonexistent when the car arrived in the Restoration Shop as there were no paid researchers on the staff at that time. The car was already partially disassembled and restoration began before full-time researchers joined the restoration program. Thus, the early restoration is sparsely covered.

In the absence of researchers in the early phases of this restoration, we have drawn very heavily from earlier reports on this car prepared by Stephen E. Drew and William A. Oden.

For more information on research techniques developed, the reader is referred to the restoration research reports on the Monterey & Salinas Valley Combine, the "Silver State" passenger car of the Nevada Central Railroad, and the locomotive "Sonoma".

The full research file showing photographic coverage, paint sampling, materials, etc. is in the CSRM archives.

VIRGINIA & TRUCKEE COMBINATION CAR NO. 16

INTRODUCTION

The Virginia & Truckee Combination Car No. 16, built in Detroit in 1874, was the first piece of rolling stock to enter (June 2, 1976) the Restoration Shop of the California State Railroad Museum.

There were no researchers on the staff as yet. The shop crew of former Southern Pacific employees removed the clerestory, cut the main side sill, took the metal corner post covers off, and stripped the interior. The real work of restoration did not commence until Mr. Ronald G. Steiner joined the staff in February 1977 as a Researcher. Actual research was made comparatively easy by the fact the historical documentation of the Virginia & Truckee is one of the most thorough of any of the 19th century Western short line railroads. Since this railroad is so well documented, we have not provided a detailed history of the Virginia & Truckee but refer the reader to works of Beebe, Kneiss, Myrick, et al.

For reasons of space, research paint sheets, news items, and other items of research, are not included with this report but remain in the CSR Museum archives.

The following account gives the history of this car, as well as a brief sketch of the Virginia & Truckee, and a description of the transformation of this aging and deteriorating relic to its former status as an elegant combination coach of an early era of railroading in Nevada.

Painted and repaired many times during a century of service to railroading, Virginia & Truckee Combination Car No. 16 appeared to be in good condition when it came into the California State Railroad Museum Restoration Shop.

However, a careful examination disclosed some damage and wear requiring extensive work. A decision was made to restore the historical and structural integrity of the car. In other words, it would leave the shop just as it looked ca. 1874-75, when it first carried passengers, baggage, and express from Reno to Carson to Virginia City. (Photo No. 1)

A thorough inspection disclosed evidence of some dry rot, damage to a corner of the clerestory, the 1965 substitution of streetcar seats for the original upholstered seats which were stolen, some damage to the left side sill, a compression beam, and a window post and truss plank.

Recent damage to the roof was caused in 1976 when the car unfortunately struck a low freeway overpass in Oakland while being trucked to the Sacramento Restoration Shop. (Photo No. 2)

The argument for a complete restoration also was supported by the fact many of the repairs made by Virginia & Truckee itself did not follow the original patterns, color schemes, finishes, etc.

So, the painstaking job of ascertaining what No. 16 looked like more than 100 years ago was undertaken. Early photographs and some correspondence by the Detroit Car Works, the manufacturer, to the Virginia & Truckee were particularly helpful.

In preparing for the restoration work, the car was partially dissassembled in the CSRM Restoration Unit Shop. Doors, windows, blinds, and some of the siding were removed. Most of the hardware, both interior and exterior, was taken out. Part of the roof, including the water closet vent, oil lamp, store jackets, and mouldings was removed. Because the trucks were removed to be sanded, the car was supported on stanchions. The loaned streetcar seats were returned to the Railway and Locomotive Historical Society's Pacific Coast Chapter. The baggage section benches were removed. The car was then braced with 2 x 6 inch lumber and rods due to the extensive removal of structural material, especially in the roof area, to prevent further damage to the car while it was weakened due to parts of the structure being removed. (Photo No. 3)

All dismantled parts were tagged and placed in a central storage area.

Meanwhile, research on the physical structure of the car was underway. The sanding process uncovered multiple layers of paint, in some cases revealing the original wood. An accurate record of all paint and varnish layers, including lettering and striping patterns, thus was obtained.

The methods of paint research for restoration were developed by a combination of trial and error and searching for methods used in old house restoration and other fields. Staff members used a variety of paint and varnish removers, attempted sand and bead blasting, and finally settled upon the method proposed and developed by Penelope H. Batcheler in 1963 in her article "Paint Color Research and Restoration" published in the technical leaflet series of the American Association for State and Local History.

Mr. M. A. Collins of Sacramento, a volunteer researcher, performed some archaeological work and produced tracings of the car.

Additional information about car research methods is available in an extensive report on the Monterey & Salinas Valley Railroad on Combination Car No. 1, on file in the CSR Museum files.

Physical research also brought into view enough markings and other evidences to "unveil" the original arrangement of fixtures, seats, and other installations in the car. (Photo Nos. 4 and 5)

As a replacement for the streetcar seats, the CSR Museum purchased about 60 appropriate seats from the R&LHS Pacific Coast Chapter. They had been procured by the Chapter from New Zealand. The seats were identical to those originally installed in the Virginia & Truckee 16. They were of an American design and had been previously shipped to New Zealand.

The next step was to determine the measurements and quantities of material needed to restore the structural integrity of the car.

Orders quickly were placed for the special wood, identical where possible, to that used in the original construction. In some cases, it was not possible to duplicate original grain patterns since lumber is no longer sawed as it was in the 1870s. By April 6, 1977, the material had arrived. Within the next month, the major restoration work was underway. (Photo Nos. 6 and 7)

During the next two months, most of the exterior work was completed with the roof, eaves, moulding, and window parts being made and installed. Platform steps were disassembled, and parts repaired or replaced, reassembled, and installed.

During this stage, paint research records were reviewed, resulting in the choice of a green slate satin enamel for the outside of the car. The Wood Shop was busy making window parts and fixtures to be installed. By August, the refinishing of wood parts was in full swing. Paints for the interior were ordered and matched to original colors.

During disassembly, it was discovered that the dry hopper had originally been located in the baggage compartment and had been moved to the other end of the car by the railroad. As part of the decision to restore the car to its original appearance, the dry hopper was moved back to the baggage department.

The original Swedish cut glass windows in the clerestory had long since been replaced. They were simulated using a sandblasting technique and designs standard for the period, since to duplicate the original etched glass would have been prohibitive in cost.

On September 6, 1977, the trucks were put back under the car, which then was moved from the work area to the rails on the north side of the shop.

While the work was in progress, additional information was turned up at the special collections department of the University of Nevada, Reno, in the form of a scrapbook of correspondence belonging to H. M. Yerington, General Superintendent of the Virginia & Truckee, in 1874. The scrapbook of incoming correspondence contained letters and a photograph from the Detroit Car Works shedding some light on the design of the window facias.

Late in the fall of 1977, the interior of the car was completed to a stage permitting much of the final painting. Among the final processes in the lengthy restoration undertaking were the painting and installation of the colorful ceiling cloth and the installation of coach seat frames. (Photo No. 10) This ceiling cloth is a duplicate of the original cloth, painted in oils as it was when the car was built. For further details on the process, see the CSRM report on the Monterey and Salinas Valley Railroad Combine.

It was mid-1978 before Unit Shop crew finished its assignment. The car was finally moved on October 5, 1978 to the Southern Pacific Sacramento Car Shop, where it remains in storage until it is permanently displayed in the California State Railroad Museum, History Building, beginning in 1980. Additional work will be necessary before it is moved to its new home, such as striping, touch up painting, upholstering, and installation of the seat cushions. (Photo Nos. 11 and 12)

The history of No. 16 and its sister car, No. 15, goes back to October 12, 1874 when a Virginia & Truckee letter to Detroit Car Works ordered them at a cost of \$3,675 each. These cars came out of the shop on December 10, the same year, and were delivered four days later in Chicago by George H. Russel, Treasurer of the Car Works, to Harry Hunter, master of transportation for Virginia & Truckee.

The correspondence leading up to this day revealed Virginia & Truckee passenger business was flourishing. For one thing, sessions of the Legislature in Carson City stimulated business to and from Reno. Henry M. Yerington, General Superintendent, made an appeal to Darius Ogden Mills, one of the three major stockholders, for authority to order new cars, explaining that it would be cheaper to buy them from a Detroit manufacturer than to have them built at Virginia & Truckee's Carson Shops or at the Central Pacific Shops in Sacramento.

The Yerington scrapbook contains subsequent correspondence from Russell to Hunter concerning the construction of the cars. Copies of Hunter's letters, if they ever existed, are not in the University of Nevada's files.

In one letter, Russell stated "oval top" windows would improve the beauty of the cars and could be included "at but trifling expense extra."

A couple of weeks later, Russel advised that his company was not interested so much in making money on the order but in producing a car "that may bring us

future work." He asserted the car Detroit had in mind would be a plain but substantial first class coach and would be "a credit to us and your road." He mentioned walnut and ash would be featured in the interior woodwork.

In a letter (November 9, 1974) to Yerington himself, Mr. Russel questioned the choice of light green for the car, saying it "seems odd but it may look nicely (sic) when finished and striped."

More than two weeks later (November 26), Russel wrote: "I am disposed to apologize for what I said about the color. It certainly looks very nice now that it is done and we have imitated your color blend closely."

The two cars arrived in Reno December 21, 1874 and were well received. Here is a report from a Virginia City newspaper, according to files of the Nevada State Museum:

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"The new passenger coaches ordered for use on the local trains between this city and Carson arrived here today, one on the morning train and the other this afternoon. They were manufactured at the Detroit Car Works, and are fitted up in elegant style, the woodwork consisting of ash and black walnut. These coaches are superior in finish to those already in use between this city and Reno. The express and baggage departments are in the front portion of the car. The trucks are of the latest and most improved pattern. The body of the coach is thoroughly braced by means of iron rods running underneath. The old passenger coaches will be taken to the Machine Shop at Carson, where they will be overhauled and repaired after which they will be run on the Reno and Carson division of the road."

Combination Passenger, Baggage, and Express Car No. 16 was basically of all wood and square nail construction and measured 44 feet 3 inches long over the body, 9 feet and 10 inches wide, and nearly 15 feet in height. The interior decor reflected an age of nearly lost pride in craftsmanship and minute hand detail. Here, car building harmoniously combined basic interior appointments with embellished and often lavish design for its own worth. Exquisite hand finished oak, ash, and walnut wood covered much of the interior.

Yerington was pleased with the two cars, expressing himself in a letter to Mills: "Hunter returned on Monday with the two new day coaches and I must say I am delighted with them. They are splendidly put up, well finished, with excellent trucks, strong, neat and serviceable and I am sure they will do well by us."

Records of the company and newspaper accounts indicate No. 16 was in and out of the shops many times for light repair, major repairs, and painting during its first 50 years in service.

By the 1880s the color scheme of Virginia & Truckee equipment had been changed, and Car No. 16's maroon and dark green had yielded to canary yellow and pea green trim. No. 16 took on a lighter appearance with gold letters, red numbers, black underframe, and trucks blending with the bright yellow.

In the early part of the 20th century, according to a notation in company files, automatic air brakes were installed. In May 1910, the car went in for

major repairs, but details are sketchy. Five years later, the records indicate the car was resided, the sill spliced on the baggage end, and a new sill installed on the passenger end.

The car was in use until 1938, when the Virginia & Truckee went into receivership and abandoned its line from Carson City to Virginia City.

(Photo) The last revenue trip on this line occurred in July 1938, an excursion sponsored by the Pacific Coast Chapter of the Railway and Locomotive Historical Society. The railroad continued service between Reno, Carson City, and Minden until May 30, 1950 when the last Reno to Minden train ended an 81 year history of this colorful and exciting carrier.

Combination Coach No. 16 was ready for a new career in September 1938 when it was sold for \$350 to Eastern Railroads Presidents' Conference. (Photo No. 13)

The new owners took delivery February 24, 1939 and arranged for an historic journey of the car to New York for its role in "Railroads on Parade," a spectacular pageant at the 1939-40 New York World's Fair. The late Gilbert Kneiss, chairman of the R&LHS Pacific Coast Chapter and a railroad historian, rode in the car as it rolled eastward on its own wheels via Southern Pacific, Union Pacific, Chicago & Northwestern, New York Central, and New Haven Railroads to the shops of the latter in New Haven, Connecticut.

Kneiss had been called upon as a consultant on technical and historical questions for the producers of the spectacular. The Virginia & Truckee Coach

No. 16 took part as a Central Pacific Coach of Golden Spike fame. It was relettered in the New Haven Shop as the Central Pacific Railroad of California No. 16.

In 1940, the R&LHS acquired ownership of the car. This was in the beginning years of the "far-sighted" program of the R&LHS to gather up historic railroad equipment for a future museum in California.

During World War II years, No. 16 was idle, occupying storage facilities at Hamondsport, New York. Due to the vision of chapter officials, this coach as well as the ancient iron horses, "J. W. Bowker" and "Genoa" of Virginia & Truckee, were preserved at a time when virtually everything on wheels that was not in use was scrapped for the war effort.

In 1948, No. 16 was assigned to another starring role, this time masquerading as a coach of the Oswego & Syracuse for the centennial celebration of that carrier. It was sent from Hammondsport to the Delaware, Lackawana, & Western shops in Scranton, Pennsylvania, for a repaint job to "a cream buff shade with maroon trim." It was again relettered, this time to Oswego & Syracuse, a 35-mile line linking these two upper New York State cities.

A year later, No. 16 turned up at the 1949 Chicago Railroad Fair, painted in a cream color but with the Oswego & Syracuse lettering unchanged. The "Genoa," a Baldwin built 1873 Virginia & Truckee locomotive, also was displayed at the fair.

It was now time for R&LHS officials to think about assembling its museum pieces in the West. The July 1952 Pacific Coast Chapter bulletin notes this development:

"Decked out in a new coat of paint our Virginia & Truckee Combination Car arrived at Portola about two weeks ago on its own wheels after an uneventful trip across country. The car was kept on local freights all the way, so the speed would be kept under 25 miles per hour. For the time being, the car will be kept in the Western Pacific's Portola roundhouse along side the engine Genoa. The Western Pacific has plenty of space in the house now that most of the steam power has been replaced by diesels."

R&LHS records show that as of August 1952, the car had been inspected in Portola and found to be in excellent shape except for the absence of seats, which had been "removed" in New York and never replaced. The seats were removed by unauthorized persons; stolen along with lamps and stove.

During this period, Virginia & Truckee lettering was restored to No. 16 and in May 1953 the car was moved to Reno, along with the Genoa, for another exhibition. The two historic pieces were proudly operated (Photo No. 14) in connection with the convention of the National Model Railroad Association, Pacific Coast Region. (The Genoa, incidentally, was deadheaded most of the way from Portola to Reno but "puffed" into Reno under its own power for the last three miles.)

After a 1955 Stockton run, Car No. 16 and the "Genoa" were moved to the Stockton Western Pacific roundhouse for continued storage.

For the next decade, apparently, the two rail vehicles were not on public view. But they were not forgotten. Railroad Magazine featured a picture of No. 16 in its October 1955 issue.

The same year, Life Magazine (November 28, 1955) gave Coach No. 16 and the "Genoa" a full page color spread under the title, "Iron Horses for the West." The pictures were taken while the subjects were posed on a trestle of the Stockton X Terminal & Eastern on August 31, 1955. (Photo 15)

For this occasion, the coach exhibited a red-brown, trimmed in yellow, color scheme.

During the 50's, the R&LHS Pacific Coast Chapter had plans to display its collection in the proposed railroad building of the Maritime Museum in San Francisco. On August 29, 1964, Coach No. 16 was moved from Stockton to Oakland and ultimately to the Bethlehem Shipyard in South San Francisco. The car had been transferred from Stockton on flat cars. The shipyard forces reassembled the car, put in new end platforms, made repairs to the steps, and cleaned the interior. The floor and sides were painted, and some 20 old San Francisco Municipal Railway car seats were installed.

"If you could turn the clock back 90 years, the car would be ready for service on the old Virginia & Truckee in Nevada's Comstock area," noted the R&LHS Chapter News of March 1965.

In the decade of the late "60's" and early "70's" major developments occurred, determining the fate of Virginia & Truckee Combo Coach No. 16 and other equipment owned by the R&LHS Pacific Coast Chapter.

The first was the decision by the owners of the historic equipment that Sacramento, rather than San Francisco, should be the location of the railroad museum. Several factors influenced this decision. First, the San Francisco building designated for the rail exhibit was determined to be unsatisfactory; secondly, Sacramento, where groundbreaking occurred in January 1863 for the start of the Central Pacific eastward, was felt to be a more appropriate location for the project. Two other factors were helpful: A willingness and eagerness by the Old Sacramento developers to set aside a site for the museum, and an interest on the part of members of the State Legislature to provide State financing.

All of this came to a head in 1974 when the voters approved a 250 million dollar State Parks and Recreation Bond Issue earmarking a substantial sum for the construction of the museum.

San Franciscans, through the city's major daily papers, called the sudden change of plans "The Great Train Robbery."

After the bonds carried and financing of the museum was assured, another important decision gave the museum an extra boost. A California State Railroad Museum staff was organized as a unit of the State Department of Parks and Recreation. This staff was assigned the task of restoring all of the equipment designated for the museum.

Bethlehem Steel Corporation, which had repaired much of the chapter's equipment, offered to repair Car No. 16 and Virginia & Truckee Locomotive No. 13, the Empire, at a cost of \$33,642 and \$8,222 respectively.

This offer was turned down after the State decided to do its own restoration.

During these years of the crucial decisions, Car No. 16 was stored in the Key System maintenance building near Oakland Toll Bridge Plaza. (Photo No. 16) While it was there, another important event took place--the Pacific Coast Chapter presented the car to the State of California in 1969. This magnanimous gesture was made in the interest of giving the State a free hand in restoring the equipment and building the museum. Members of the society, however, sit on the museum Advisory Board which meets six times a year in Sacramento.

On June 2, 1976, Car No. 16 was moved from Oakland to Sacramento. It was one of the first major pieces of rolling stock to be restored after researchers had authenticated the color scheme, fixtures, woodwork, and other features of this rare 105-year old part of railroad history of the West.

As mentioned earlier, the restoration work has been nearly completed, and Car No. 16 is awaiting its permanent home in the museum.

Fate was not quite as kind to No. 16's sister car, No. 15, which is owned by Old Tuscon Corporation and is used as an office north of Las Vegas, Nevada.

CHRONOLOGY

May 8, 1867	Virginia & Truckee Railroad incorporated by William Sharon.
March 5, 1868	Nevada Legislature issues charter to Sharon.
January 1869	21 mile Carson City to Virginia City route surveyed.
1869	Three locomotives (Lyon, Ormsby, Storey) ordered from H. J. Booth (Union Iron Works, San Francisco).
February 18, 1869	Ground broken below Gold Hill.
April 1, 1869	400 men on construction work.
August 6, 1869	Oxen haul locomotive from Reno to Carson City.
September 6, 1869	First rails arrive San Francisco by ship.
September 28, 1869	First spike driven by Henry Yerington, Virginia & Truckee Superintendent.
September 30, 1869	Crown Point Trestle completed.
October 5, 1869	Oxen brings two more engines, Reno to Carson City.
November 12, 1869	First train operated to Gold Hill.
December 21, 1869	Scheduled trains operating, Carson to Gold Hill.
January 29, 1870	First train to Virginia City.
July 11, 1870	Timetable No. 1 issued--seven trains daily (two passengers), Carson to Virginia City.
Spring 1872	Construction under way, Carson City to Reno.
August 24, 1872	Last spike driven, Carson to Reno line.
1873	30 trains a day, owners share \$100,000 monthly profit.
October 12, 1874	Two combination (passenger-baggage, express) cars ordered.
December 10, 1874	Virginia & Truckee Combination Cars Nos. 15 to 16 completed at Detroit Car Works.
December 14, 1874	Cars delivered at Chicago to Virginia & Truckee.

December 21, 1874 Combo coaches Nos. 15 and 16 arrive on Virginia & Truckee line.

1875 D.O. Mills, California banker, now owns two-thirds of Virginia & Truckee Railroad which handles 100 cars a day from mines. Two switchers purchased from Baldwin Locomotive Works.

1876-77 Most productive years for Virginia & Truckee, but slump not far off.

1879 Former President U. S. Grant visits Virginia City aboard private car "California."

1880-83 Carson & Colorado, narrow gauge line, built from Mound House, Nevada, to Keeler, California. This Virginia & Truckee subsidiary served mines south of Virginia City.

1890 End railing mud/slash guards applied, express stove removed from No. 16.

March 17, 1897 Corbett-Fitzsimmons prize fight brings scores of special cars to Carson City.

1898-99 ICC mandated safety appliances added to cars. Air brakes included.

1900 Southern Pacific buys Carson & Colorado and renames it Nevada & California.

June 24, 1905 New Virginia & Truckee incorporated to purchase predecessor company and build 15 mile branch, Carson City to Minden.

1906 Minden line built.

1916 Car No. 16 rebuilt-resided, refloored, and bench seats added.

1924 Dividends cease; red ink begins for Virginia & Truckee.

April 1933 Ogden Mills, grandson of D. O., now sole owner; Former President Herbert Hoover and Mills on inspection trip.

1937 Death of Ogden Mills.

April 27, 1938 Virginia & Truckee enters into voluntary receivership.

1938 Paramount Pictures purchases several passenger cars including Sharon's private car.

8-18-38

September 2, 1938 Car No. 16 sold for \$350 to Eastern Railroad's President's Conference.

February 24, 1938 Car No. 16 delivered to new owners at Reno; moved to New Haven shops of New Haven Railroad.

1939-40 No. 16 becomes Central Pacific No. 16 at New York World's Fair "Railroads on Parade" pageant.

1940 Car presented to Railway and Locomotive Historical Society.

1941-45 World War II stimulates Virginia & Truckee business, giving carrier a few years on borrowed time.

June 9, 1948 Car No. 16 moved from Hammondsport, NY, to Scranton, PA, for repainting and relettering.

November 1948 Coach participates in centennial celebration of Oswego & Syracuse Railroad.

1949 Car displayed with "Genoa" at Chicago Railroad Fair.

May 30, 1950 Last train to Minden. ICC permits Virginia & Truckee to abandon service.

June 1952 Car No. 16 ownership transferred to Pacific Coast Chapter, R&LHS.

July 1952 No. 16 returns to West; stored in Western Pacific Roundhouse in Portola, California, along with locomotive "Genoa."

April, May, 1953 Virginia & Truckee lettering restored; car considered in good condition but seats missing, having been removed in New York.

May 1953 No. 16 and "Genoa" deadheaded to Reno for part in convention of Pacific Coast region, National Model Railroad Association.

August 13, 1953 Two rail vehicles now in storage in Western Pacific Roundhouse in Stockton.

October 1955 Railroad Magazine uses photograph of No. 16.

November 28, 1955 Life Magazine features No. 16 and "Genoa" in color layout.

August 29, 1964 No. 16 and "Genoa" moved to Oakland.

September 4, 1964 No. 16 to Bethlehem Shipyard, San Francisco.

February 1965	Bethlehem crew repairs No. 16, installs streetcar seats.
1969	Car No. 16 presented by R&LHS Coast Chapter to State of California for future display at California State Railroad Museum.
June 2, 1976	Car No. 16 moved from Oakland to Restoration Shop, Southern Pacific Sacramento yards.
February 28, 1977	R&LHS agrees to sell seats it owns to state, to be substituted for streetcar seats in No. 16.] no - a 946
October 5, 1978	Following restoration work, No. 16 moved to Southern Pacific Car Shop in Sacramento, where it awaits completion of museum.

PASSENGER CAR SPECIFICATIONS

(As Built)

Date: Nov. 1979By: R. RoddaCar: Virginia & Truckee Combination Car No. 16Builder: Detroit Car Works Builder # or Plan #: - -Date Built: Oct. - Dec. 1874 Date Ordered: Oct. 12, 1874 Gauge: StandardType of Car: Passenger, baggage, express Passenger Capacity: 40Type of Seats: Upholstered leatherette Number of Sleeping Berths: noneNumber of Rooms, Compartments, etc.: 2Type of Construction: Basically all wood and square nail construction. Tin roof,
hand-finished oak, ash and walnut paneling on interior.Type of Platforms/Vestibules: Open platformType of Roof: TinType of Floor: Wood Type of Frame: Wood - truss rodType of Body Bolsters: Wood, 6 x 13 inches Type of Couplers: Cast link and pinType of Draft Gear: non-continuous, sprung Type of Brakes: Hand brakesExtreme Length of Car: 52 feet; 9 in. Length over Buffers: 52 ft. 9 in.Length over End Sills: 44 ft. 6 in. Extreme Width: 10 ft. Width over Side Sills: 10 ft.
8 ft. 3 in.Extreme Height from top of Rail: 14 ft. 9 in. Height from Top of Rail: 13 ft. 8 in.Light Weight: 48,000 lbs. Extreme Wheelbase: 39 ft. 6 in.Type of Trucks: 2, 4-wheel wood frameTruck Wheelbase: 5 ft. 9 in. Type Wheel Bearings: BrassWheel Dia.: 33" Wheel Manufacture & Dates: Griffin (Tacoma, WA.) 1913(Original mfg. and dates unknown)Type of Safety Equipment: - -Type of Heating: Spear Anti Clinker stove (1)Type of Air Conditioning: - -Lavatory Facilities: Dry hopper, corner urinalType of Lighting: Single font oil lamp Number of Lighting Fixtures: 2

(over)

PASSENGER CAR SPECIFICATIONS

Type of Signal/Train Communication Equipment: Signal cord

Type of Electrical Generator: - -

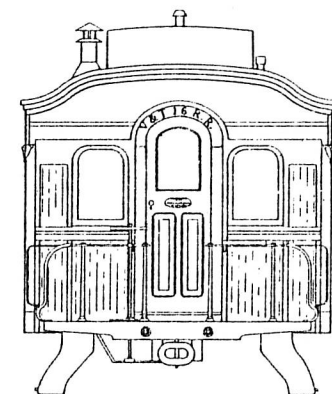
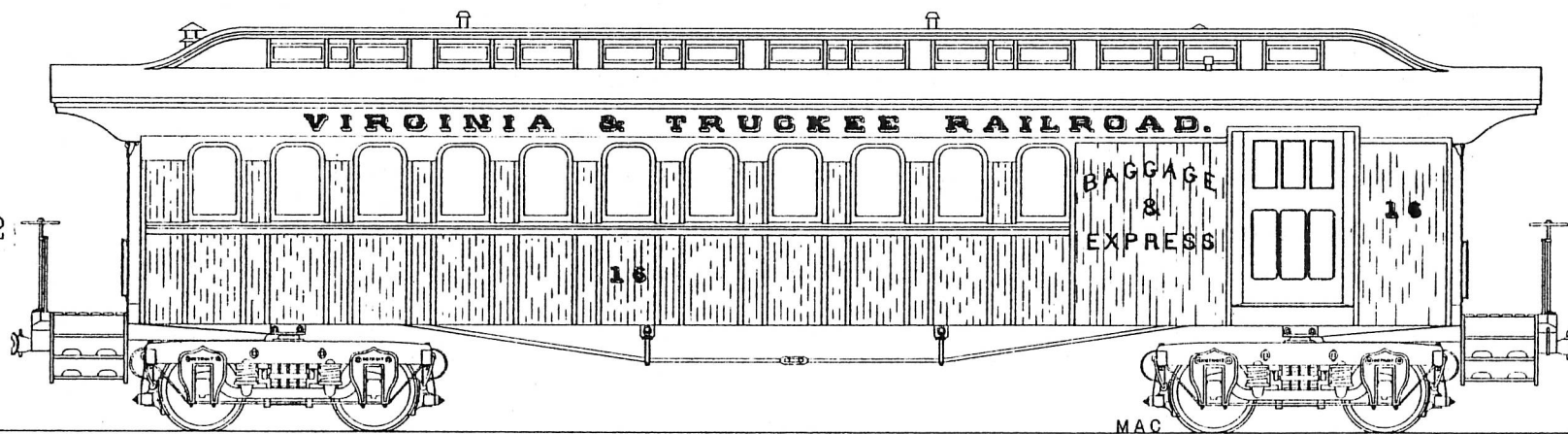
Obvious Historic Patches/Modifications to Car: (use add'l sheet if req'd)

Identification Numbers/Markings on Carbody, trucks, etc.: (use add'l sheet if req'd)

Attach CSRM Engineering Drawing reduction print and Chronology for further information.

See Restoration Research Report this car for chronology, etc.

VIRGINIA AND TRUCKEE RAILROAD
COMBINATION CAR NO 16
DETROIT CAR WORKS
1874



MAC

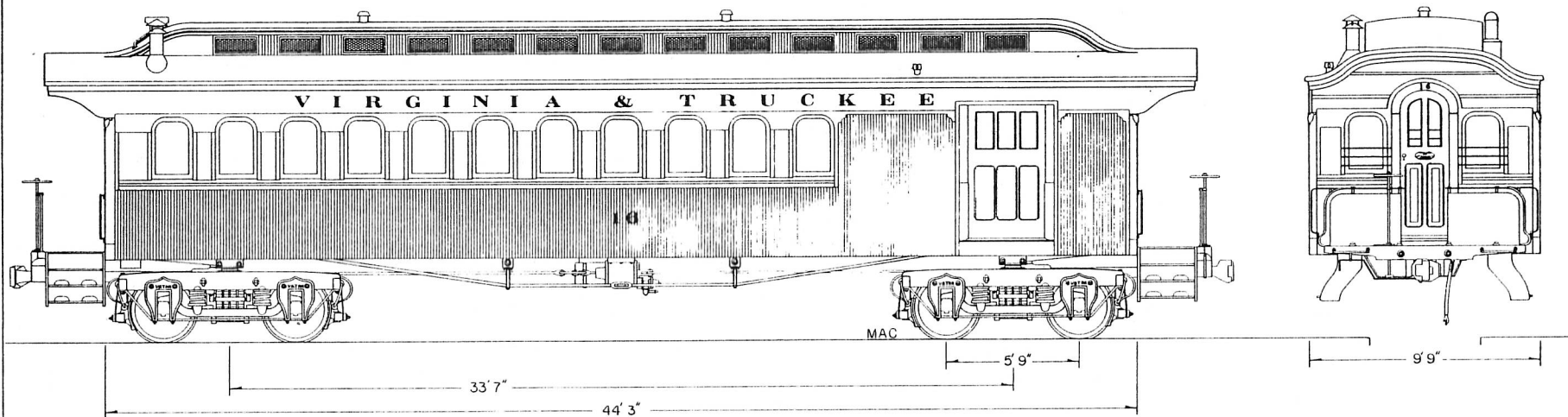
PASSENGER END

SCALE 0 1 2 3 4 5

MICHAEL A. COLLINS JULY, 1976

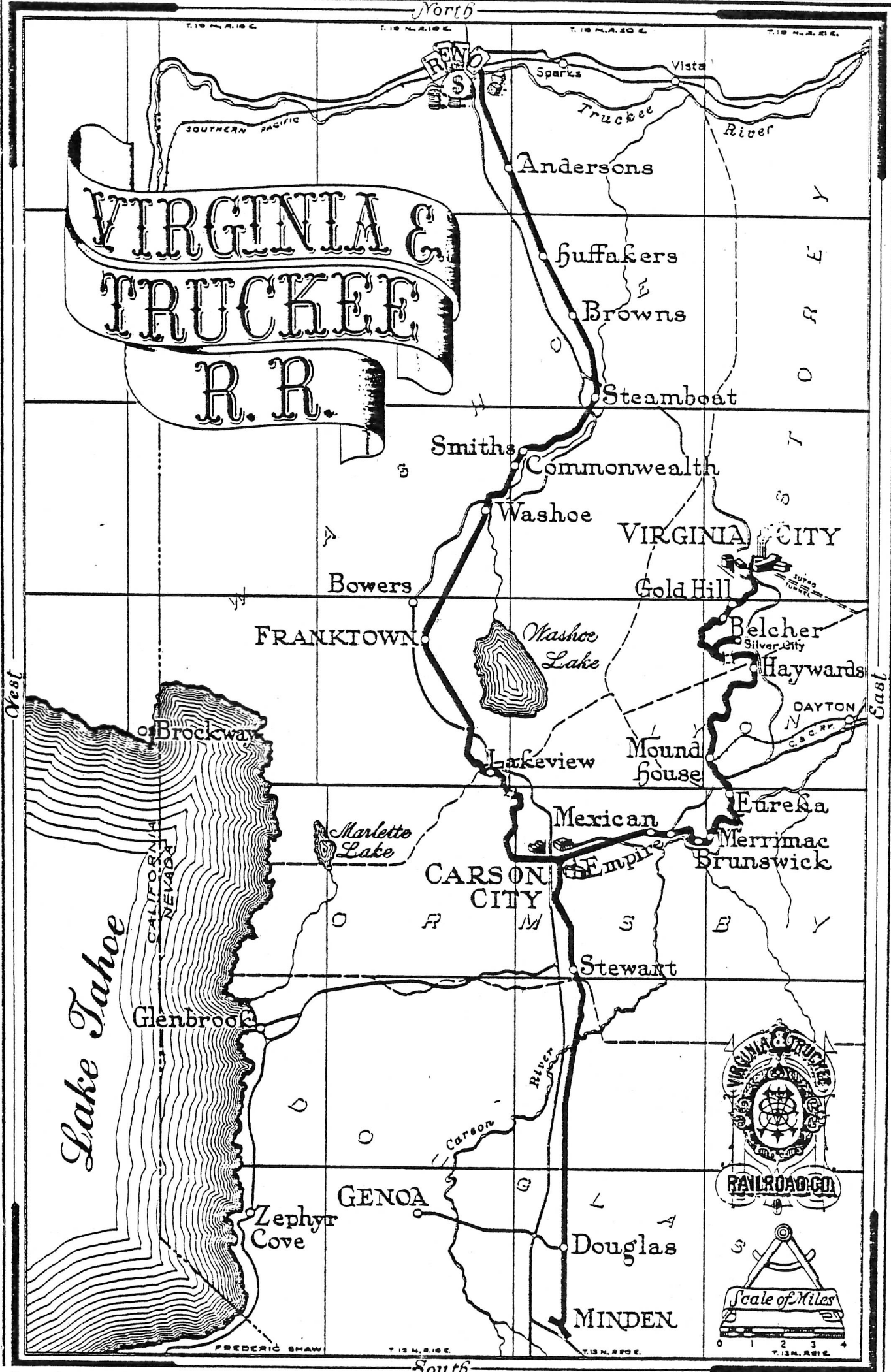
©

VIRGINIA AND TRUCKEE RAILROAD
COMBINATION CAR NO 16
DETROIT CAR WORKS
CIRCA 1925



SCALE 0 1 2 3 4 5

MICHAEL A. COLLINS JULY, 1976
REVISED MAY, 1977



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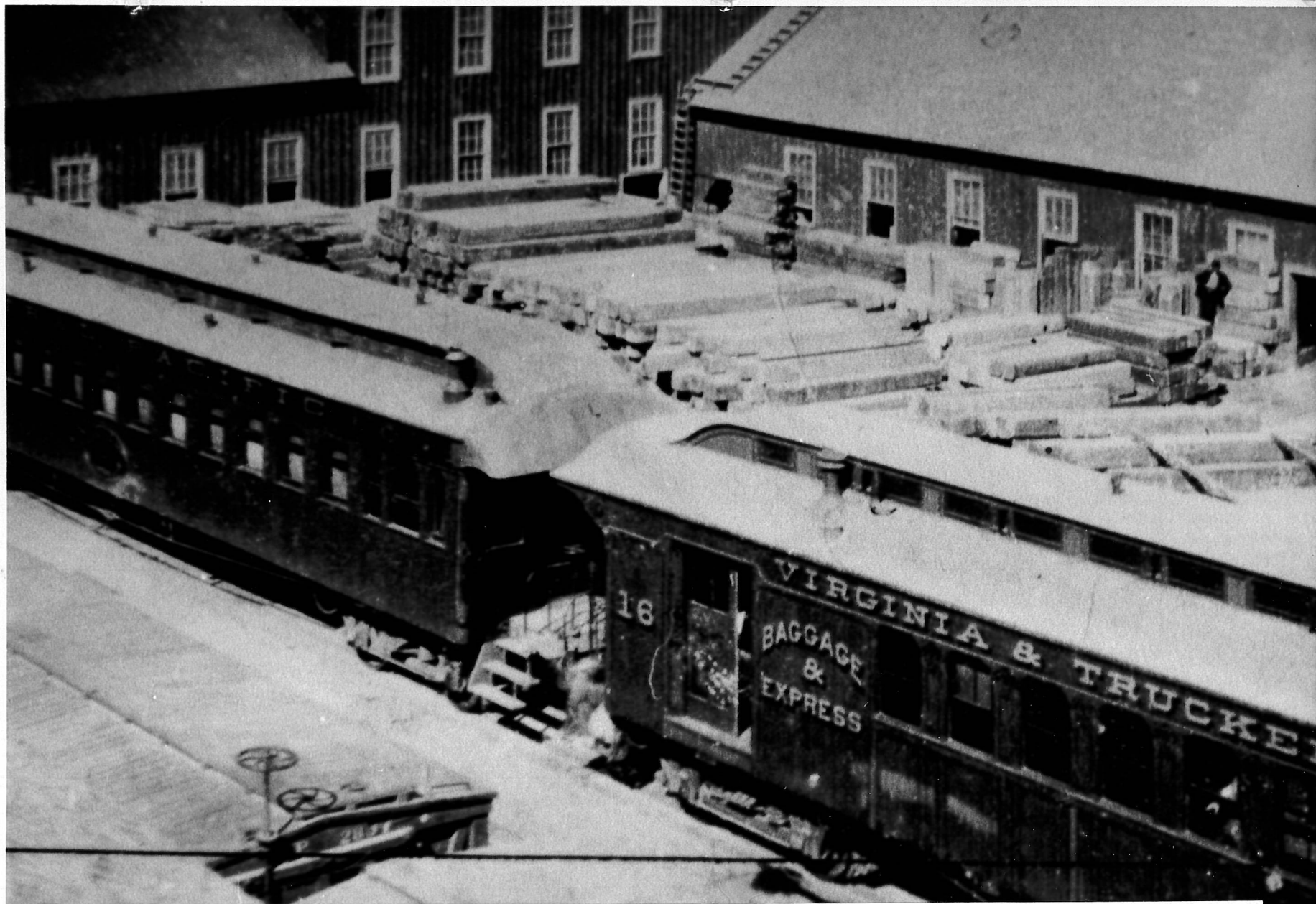


Photo #1

Earliest picture of Virginia and Truckee Combination Car No. 16 in museum files. This picture was taken in Virginia City around 1875, just a year or so after No. 16 was delivered to the V. & T. by the Detroit Car Works. (From M. A. Collins' copy negative of original E. Muybridge (?) stereo in collection of David L. Rousar)

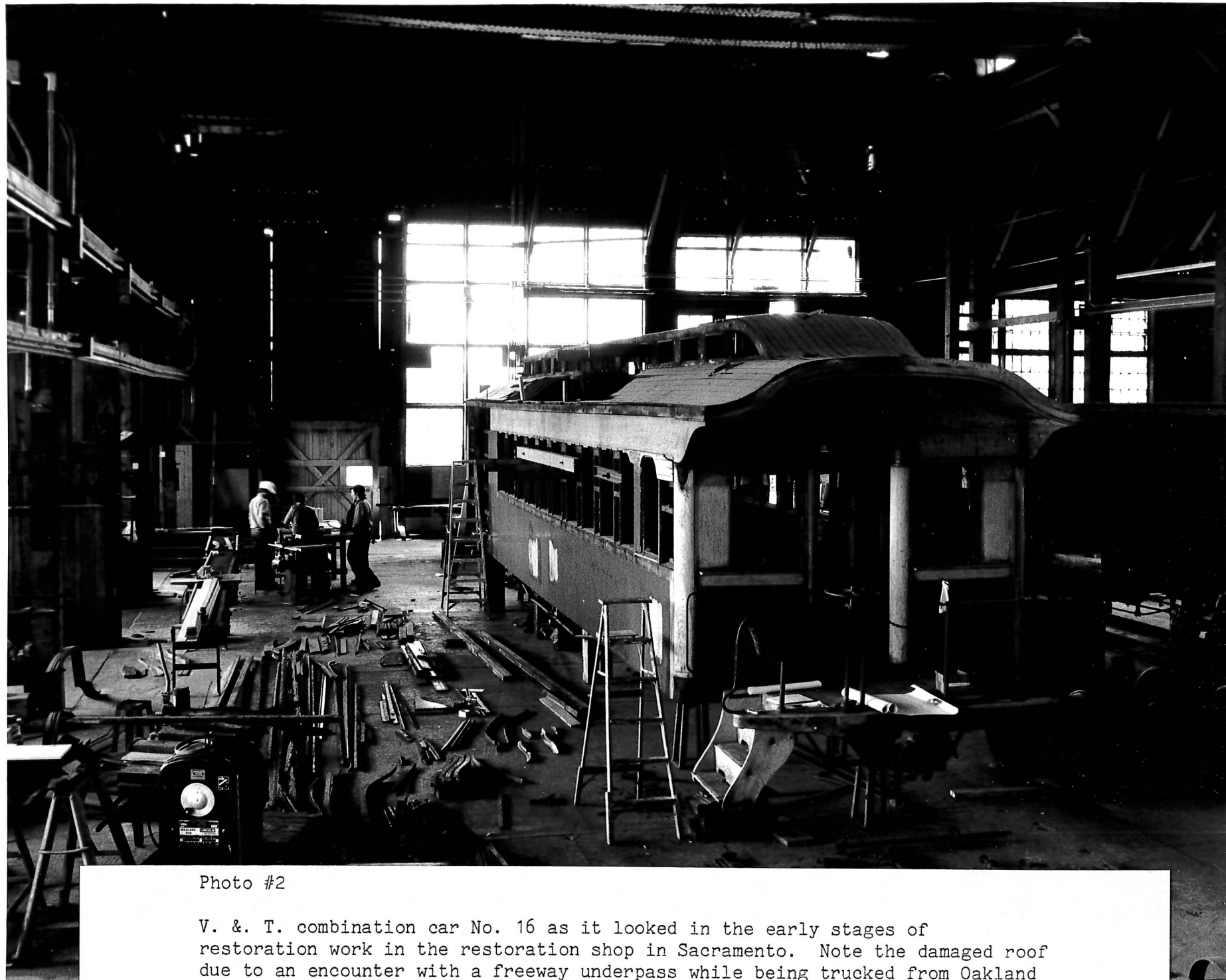


Photo #2

V. & T. combination car No. 16 as it looked in the early stages of restoration work in the restoration shop in Sacramento. Note the damaged roof due to an encounter with a freeway underpass while being trucked from Oakland to Sacramento. (CSRM photo)

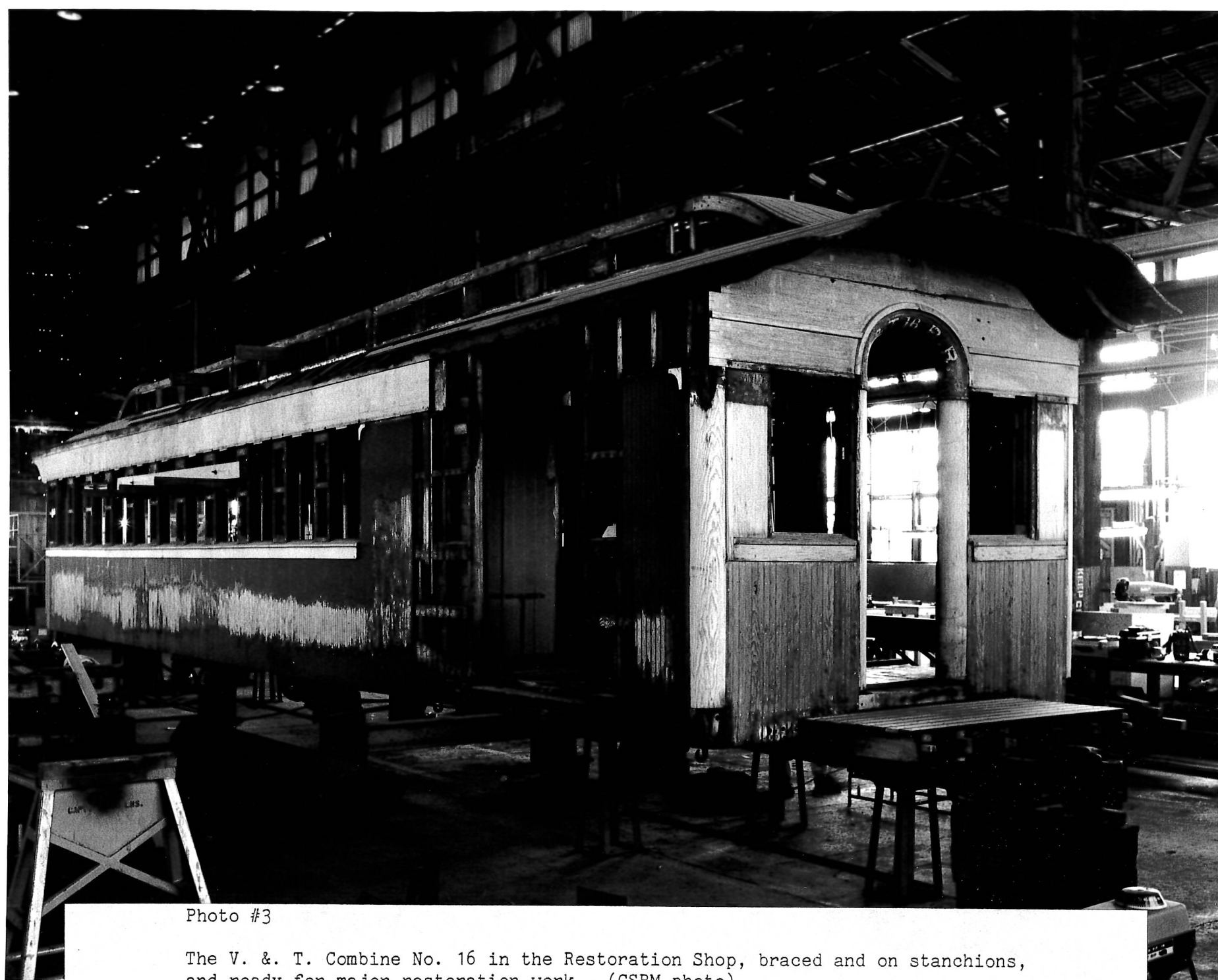


Photo #3

The V. & T. Combine No. 16 in the Restoration Shop, braced and on stanchions, and ready for major restoration work. (CSRM photo)



Photo #4

V. & T. markings exposed on exterior door lintel at passenger end of Combination Car No. 16. This and other "century old" markings came to light during research to ascertain various paint designs. (Michael A. Collins Photo)



Photo #5

V. & T. lettering on the truck pedestal of Combination Car No. 16.
(Stephen E. Drew Photo)



Photo # 6

The baggage compartment end of the V. & T. combine No. 16 showing section of the side sill being replaced. (CSRM photo)



Photo #7

The roof of No. 16 as it appeared midway through restoration work. The wood is new and was specially ordered to match, as closely, the original timbers used to build the car in Detroit in 1874. (CSRM photo)

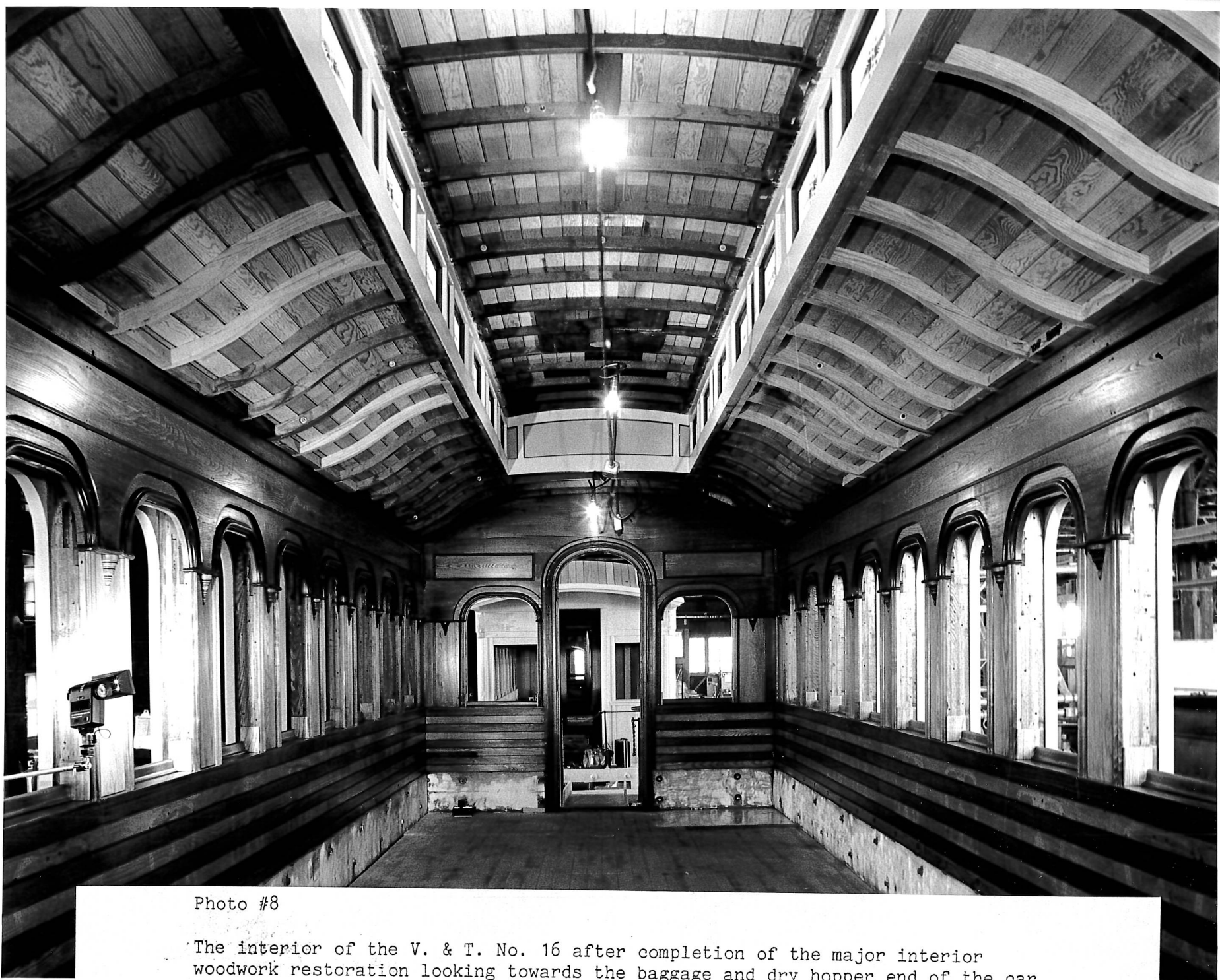


Photo #8

The interior of the V. & T. No. 16 after completion of the major interior
woodwork restoration looking towards the baggage and dry hopper end of the car
(CSRM photo)



Photo #9

Seat frames installed in the restored V. & T. No. 16 (fall 1977). (CSRM photo)



Photo #10

Installing the ceiling cloth in the clerestory. Side panels have already been installed (April 1978) (CSRM photo)



Photo #11

The restored interior of the V. & T. No. 16. Note baggage racks, ceiling cloth, and wood shutters in lieu of blinds at the windows. Interior requires only the addition of the seat cushion for completion. (June 1978) (CSRM photo)



Photo #12

The Virginia and Truckee Combine No. 16 restored and awaiting movement to the Southern Pacific Sacramento Car Shop No. 3 for storage until opening of the California State Railroad Museum in 1980 (June 19, 1978). (CSRM photo)



Photo #13

V. & T. Combination Car No. 16 as it looked in 1975 in storage at the old Key System maintenance building near the San Francisco-Oakland Bay Bridge Toll Plaza in Oakland. (Stephen E. Drew Photo)



Photo #14

The V. & T. Combination Car No. 16 with the "Genoa" appearing at Reno for the National Model Railroad Association in May of 1953. (Nevada Historical Society collection, Walter Mulcahy photo)



Photo #15

The V. & T. Combo No. 16 with the "Genoa" as they appeared for a Life magazine photo on August 31, 1955. The consist was photographed on the Stockton, Terminal, and Eastern Railroad. (Stephen E. Drew collection, Gilbert H. Kneiss photo)



Photo #16

Combination baggage-passenger car No. 16 of the V. & T. looked like this in 1938 at Carson City when the railroad sold it to Eastern interests for participation in "Railroads on Parade" at the 1939-40 World's Fair in New York City. (Roy D. Graves Photo)